

Claims

1. Injection moulding device (1) comprising a mould body (2,5) having a cavity (4), an elongated nozzle (3) seated in the cavity, a valve pin (11) coaxially in the nozzle and actuating means (15) connected to the valve pin for axially displacing the valve pin in the nozzle, the actuating means comprising a cylinder housing (30) having a first pressure medium inlet (38) connected to a pressure medium duct (57) and a second pressure medium inlet (39) connected to a pressure medium duct (56), and a piston (33) reciprocatable in the cylinder housing (30) between an upper end position and a lower end position, the piston (33) being coupled to the valve pin (11), characterised in that the piston comprises a fluid passage (55) via which pressure medium can pass when the piston is in a position between its upper and its lower end position, and which is at least partly closed off when the piston is in its lower and/or its upper end position.
2. Injection moulding device (1) according to claim 1, comprising a flow detection means (58,59) in at least one of the pressure medium ducts (56,57), for forming a displacement signal.
3. Injection moulding device (1) according to claim 2, wherein the displacement signal forms a visual indication of the needle position.
4. Injection moulding device (1) according to any of the preceding claims, wherein the cylinder (15) comprises a height adjustment means (40), displaceable in the cylinder housing (30), for adjusting at least one of the end positions.
5. Injection moulding device (1) according to any of the preceding claims, wherein the flow detection means (58,59) and a signal processing and/or display means (62) connected to the flow detection means are located at a distance from the mould body.
6. Cylinder (15) for use in an injection moulding device according to any of the preceding claims, comprising a cylinder housing (30) having a first pressure

medium inlet (38) connected to a first pressure medium duct (37) and a second pressure medium inlet (39) connected to a second pressure medium duct (56), and a piston (35) reciprocatable in the cylinder housing (30) between an upper end position and a lower end position, the piston being suitable to be coupled to the valve pin (11), characterised in that the piston comprises a fluid passage (55) via which pressure medium can pass when the piston is in a position between its upper and its lower end position, and which is closed off when the piston is in its lower and/or its upper end position.